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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,822	08/17/2006	Koji Watanabe	80054(30721)	2431

7590 12/23/2008  
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EXAMINER
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LE, TUNG X

ART UNIT	PAPER NUMBER
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2821

MAIL DATE	DELIVERY MODE
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12/23/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,822	<b>Applicant(s)</b> WATANABE ET AL.	
	<b>Examiner</b> TUNG X. LE	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on RCE 12/02/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-7 and 10-15 is/are allowed.
- 6) ☒ Claim(s) 1,8,9,16,22 and 23 is/are rejected.
- 7) ☒ Claim(s) 17-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This Office Action is in response to the Applicants' request for continued examination (RCE) filed on December 02, 2008 and amendment concurrently filed therewith. In virtue of this amendment, claims 1-23 are pending in the instant application.

#### ***Continued Examination***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/02/2008 has been entered.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 8-9, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang et al. (U.S. Patent No. 6,362,575 B1).

With respect to claim 1, Chang discloses in figure 2 a discharge lamp ballast, comprising a power converter (having a boost converter including elements [L1, D, Q1]) that includes at least one switching element [Q1] and is connected between a power

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source [1, 2] and a high intensity discharge lamp [Rlp]; and a control circuit (having a control circuit including elements [7, 15-28, 30]) that control an on/off state of the switching element (having a microcontroller [7] for controlling on or off state of the switching [Q1]) so as to provide prescribed lamp power for the lamp based on lamp power control after the start of the lamp (column 4, lines 36-38); wherein, after the start lamp, the control circuit is configured (i) to control the on/off state of the switching element by the lamp current control (see column 4 in lines 39-41 and column 8 in lines 17-18) ; and then (ii) based on high power control, to control the on/off state of the switching element [Q1] so that at least one of an effective value (lighting value) and a peak value (see figure 4) of the lamp power provided for the lamp is increasing more than that *adjusted by constant lamp power control* (see figure 4c, column 9 in lines 19-8) based on high power control after the start of the lamp, the constant lamp power control being control for adjusting the effective value of the lamp power provided for the lamp a prescribed power value (see column 9, lines 4-18).

With respect to claim 8, Chang discloses that the control circuit controls the on/off state of the switching element based on the high power control for a prescribed time period (see figure 4) immediately after reaching a stable state of the lamp (see figure 4c).

With respect to claim 9, Chang discloses that wherein after reaching a stable state (figure 4 shows how a stable state to be reached) of the lamp, control for on/off state of the switching element based on the constant lamp power control and control for the on/off state of the switching element based on the high power control are performed

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alternately and periodically through the control circuit (see figure 4c, column 9 in lines 19-8).

With respect to claim 16, Chang discloses that the control circuit executes correction control (see figure 4c, column 9 in lines 19-8).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (U.S. Patent No. 6,362,575 B1) in view of Takahara (U.S. 6,992,718 B1).

With respect to claims 22 and 23, Chang discloses all of claimed subject matter, as expressly recited in claim 1, except for specifying that a projector comprising a color filter whose transmission color by light from the light source and the control circuit synchronizes timing of polarity inversion of the lamp voltage applied across the lamp.

Takahara discloses in figures 120-121 and 159 a discharge lamp ballast functioning as a projector for a projection display apparatus (column 110, lines 20-25) having a color filter [124] whose transmission color by light from the light source and control circuit synchronizes timing of polarity inversion of the lamp voltage applied across the lamp (column 73, lines 10-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the ballast circuit of Chang by employing the discharge

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ballast circuit including a projector having a filter color for transmitting color with polarity inversion of the lamp voltage applied across the lamp in order to prevent occurrence of flicker and inclination in the brightness for getting a desired images since such projector with a filter for transmitting color for the stated purpose has been well known in the art as evidenced by the teaching of Takahara (see column 73, lines 18-20).

***Allowable Subject Matter***

6. Claims 2-7 and 10-15 are allowed.
7. Claims 17-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. The following is a statement of reasons for the indication of allowable subject matter:

Reasons for indicating the allowable subject matter of claims 2-7, 10-15, and 17-21 were provided in the previous office action.

***Response to Arguments***

9. Applicant's arguments with respect to claims 1, 8-9, 16, and 22-23 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUNG X. LE whose telephone number is (571)272-6010. The examiner can normally be reached on 8:30 AM - 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TXL 12/16/2008

/David Hung Vu/  
Primary Examiner, Art Unit 2821